ELECTRONICS COMMUNICATIONS (CERTIFICATE T0904)

Technology and Health Division
Certificate T0904
In addition to courses in electronics fundamentals, the Electronics Communications certificate program encompasses the study of both wire-based and wireless forms of analog and digital communications systems. Among the topics covered are amplitude and frequency modulation, multiplexing, antennas, transmission lines, and radio-wave propagation, as well as microwave systems, including radar and satellite operations, and computer networks.

This advanced certificate is one of three available for students who do not complete all second-year systems courses at once or who complete them one at a time. Students completing certificate programs are automatically eligible for the National Association of Radio and Telecommunications Engineers (N.A.R.T.E) 4th Class Technician license.

Required Courses

Course Prefix	Course Name	Units
CNET 56	Computer Networks	4
ELEC 11	Technical Applications in Microcomputers	3
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 53	Communications Systems	4
ELEC 55	Microwave Communications	4
ELEC 56	Digital Electronics	4
ELEC 76	FCC General Radiotelephone Operator License Preparation	2
TECH 60	Customer Relations for the Technician	2
Total Units		**35**

Electronics and Computer Technology Website (http://www.mtsac.edu/electronics/)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- be able to employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).
- demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- in advanced courses, connect concepts learned in introductory courses to more general principles applicable in the employment context.

Review Student Learning Outcomes (SLOs) (http://www.mtsac.edu/instruction/outcomes/sloinfo.html) for this program.